



Norman H. Bangerter  
Governor

Dee C. Hansen  
Executive Director

Dianne R. Nielson, Ph.D.  
Division Director

# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

July 1, 1992

TO: Minerals File

FROM: Holland Shepherd, Senior Reclamation Specialist *HWS*

RE: Inspection Topaz Mountain Mine, Brush Wellman, M/023/003, Juab, Utah

Date of Inspection: June 25, 1992  
Time of Inspection: 2:00 p.m. - 5:00 p.m.  
Conditions: Cloudy and warm  
Participants: Cristina Reed, BLM; John Wagner, Brush Wellman; Holland Shepherd, DOGM

**Purpose of Inspection:** The purpose of this inspection was to monitor the operator's progress associated with reclaimed areas on the site, and a new set of test plots established onsite last fall. The operator has been actively reclaiming completed areas of the site for the last 2-3 years. Also, some tuff covered areas of the site have been under going a process of natural revegetation. These areas are older and warrant discussion.

First portion of the inspection involved a look at the test plots installed last fall. The plots are located by the Section 16 Dump site, and encompass @3 acres of site (see attached map). The operator has clearly described these plots and the seedmix, in the 1991 Annual Report. The site maintains less than a years worth of growth, so it is to soon to make a determination concerning plant success.

The vegetation in the test plots is very sparse to non-existent. Of the species planted the Shadscale is the most conspicuous, at this time. Areas where water has ponded have created small islands of plants. I informed Mr. Wagner that I would recommend some other species to experiment with at the site, that were adapted to dry climates (see attached list).

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The next portion of the inspection involved the Sigma Emma dump and Taurus dump areas. Planting in these areas is about two years old and still sparse. Some of the most abundant species I observed were Rabbitbrush and Squirrel Tail.

We looked briefly at the Blue Chalk North area, portions of which have been under reclamation for a much longer period of time than the surrounding site (>10 years of age). Vegetation in this area is still quite sparse, but some stands of shrubs have become well established. The area is composed chiefly of a rhyolite waste rock. This material has been found to be much more conducive to plant growth than the tuff wastes that have also been deposited on other areas of the site.

The poorest waste material (for plant regrowth) is found on the dumps composed of volcanic tuff. This material is high in sodium salts and has a high clay texture, resulting in an extreme water stress condition for plants attempting to grow in it. Fortunately, after years of weathering the material is starting to support plant growth. Most of the plant growth now found on these tuff covered dumps has resulted via natural invasion. The operator was given a permit variance waiving the reseeding requirement for these area, because of the poor quality of planting material. Vegetation is still very sparse on these dumps, however islands of plants can be seen growing in areas where water collects. The exposed veneer of tuff material has become weathered and conditioned since initial deposition so that now it is able to support plant life.

The weathering and break down of overburden and parent material will be an important process for the establishment of plant growth. This process will also take a considerable amount of time and will be most important on areas that do not receive topsoil.

According to Mr. Wagner, the site is experiencing another drought year. The operator's revegetation efforts are being severely hindered by the drought. The operator reports precipitation summary to the Division every year in the annual report. Planting in the fall, and later spring germination will be very important in achieving revegetation success at this site.

jb  
cc: Greig Watkins, Brush Wellman  
Cristina Reed, BLM  
M023003

Recommended Additional Plant Species to be Used at  
**Topaz Mine**  
**Brush Wellman**  
**M/023/003**

**Grasses:**

<u>Common Name</u>	<u>Scientific Name</u>	<u>Rate lbs/ac</u>
Needle and Thread	Stipa comata	2
Galleta grass	Hilaria jamesii	2-3

**Forbs:**

Palmer penstemon	Penstemon palmeri	2-3
Desert globemallow	Sphaeralcea ambigua	2-3

**Shrubs:**

Spiney hopsage	Grayia spinosa	1-2
Winterfat	Eurotia lanata	1-2
Prostrate kochia (sub-shrub)	Kochia prostrata	3-4



# BRUSH WELLMAN, INC.

TOPAZ MINING PROPERTY

## Pits, Dumps, & Roads Reclamation Map

situated in  
JUAB COUNTY, UTAH









